

REMARKS

Claims 31, 33-34 and 36 remain in the application.

Claims 31, 33 and 34 were rejected under 35 U.S.C. §112, first paragraph, as failing to comply with the written description requirement. In particular, the Examiner states that the specification as originally filed does not disclose that the first member initially has a generally planar portion and an arcuate portion at a second end of the planar portion. The Applicant respectfully traverses this rejection. The specification on page 5, lines 7-9 states that “a method for applying adhesive within an assembly of the type having a certain coverage portion and a certain fillet portion is provided.” Also in the specification on page 6, line 15 through page 7, line 5 it is stated:

Particularly, joint 10 includes a first dimension or portion which is conventionally referred to as the “flange coverage” dimension or length 14 and which extends along first member 20 from a point 16 at a first end of the member 20, to a point 22 at which the member 20 begins to curve or form a “tangent portion” 26. Joint 10 further includes a second dimension, portion, or length 24 which is referred to as the “flange fill” or “fill” dimension or portion and which extends from point 22 to a line or segment 25 which is substantially colinear to curved or “tangent” portions 26, 28 of respective joint-forming members 18, 20. Similarly, the one half coach joint 30, shown in Figure 2, also has a coverage length or dimension 32 and a fill dimension or length 34, each of which terminate at point 8 at which member 33 begins to curve or form a tangent portion.

The above writing from the specification clearly discloses that the first member initially has a generally planar portion and an arcuate portion at a second end of the planar portion. Further, the drawings clearly show this structure.

Claim 36 was also rejected under 35 U.S.C. §112, first paragraph, as failing to comply with the written description requirement. In particular, the Examiner states that the specification

as originally filed does not disclose that the viscous adhesive is deposited initially at a center point for the coverage length so that the adhesive extends between fifty to seventy-five percent of the coverage length. The Applicant respectfully traverses this rejection.

In the specification it states that on page 7, lines 16-25 that:

For the lap joint embodiment, shown in Figure 1, the adhesive 12 covers or resides along a distance which is about equal to about fifty to about seventy-five percent of the total coverage length 48 which is defined to be the length of overlap of members 2 and 4. Particularly, in one non-limiting embodiment, adhesive 12 is placed or deposited on the center point 50 of the length 48 and made to extend in a substantially equal length in each direction from the center point 50, thereby interconnecting member 2 to member 4 in order to form joint 46.

Again, the above writing from the specification clearly discloses that the viscous adhesive is initially deposited at a center point 50 so that the viscous adhesive extends between fifty to seventy-five percent of the coverage length. Further, Figure 1 clearly shows this structure.

Therefore, the Applicant respectfully submits that there is simply no statutory basis for the rejection of claims 31, 33, 34 and 36 under U.S.C. §112, and that the claims are allowable over this rejection.

Claims 31 and 33 were rejected under 35 U.S.C. §102(b) as being anticipated by Kehr (U.S. Patent 3,660,217). The Applicant respectfully traverses this rejection.

U.S. Patent Number 3,660,217 to Kehr discloses a method and means for laminating superimposed layers of the same or different material using a curable liquid adhesive composition. The method includes the steps of feeding a continuous web of material 10 over a guide roll 12, and through an adhesive application station 13. The adhesive application station 13 includes an applying cylinder 14 submerged in a bath of the liquid polyene/polythiol

adhesive 15. The cylinder includes etched lines 16, 17 that define the pattern of the adhesive lines applied to the surface 18 of the web of material. The adhesive is applied to form staggered lines of adhesive on each layer in the stack that extend the entire length of the member. Thus the pattern of the etched lines 21, 21 is affixed to the web of material in a staggered relationship. The material is cut into sheets and stacked so that parallel adhesive bonding lines 20, 21 are in a staggered relationship to each other. The stack of material is passed through a compressive means, and the adhesive is cured using irradiation. As shown in Fig. 3, a method of producing a honeycomb core includes the steps of applying the adhesive in alternately spaced lines to opposite sides of the material, and lapping the single sheet of material back and forth. This achieves an unexpanded honeycomb, the adhesive is cured, the stack is then expanded, such as by using an expansion force on each end of the stack. Kehr '217 does not disclose a method of forming a coach joint between two members that includes the steps of defining a coverage length and a fill length along the length of a first member *initially having a generally planar portion and an arcuate portion* and applying a viscous adhesive in about 50% of the coverage length and in about 10% of the full length, to secure the two members together.

In contradistinction, amended claim 31 clarifies the invention as a method of repetitively forming a coach joint between two members during a manufacturing process using a viscous adhesive. The method includes the steps of positioning a first member to be in contact with a second member to form a coach joint. The first member initially has a generally planar portion and an arcuate portion at the second end of the planar portion. The area of contact forming the joint includes a coverage portion extending along the length of the first member from a first point at a first end of the first member to a second point at the second end at which the first member begins to curve to form a tangent portion, and a fill portion adjacent the coverage portion and

having a flange fill length extending from the second point to a line segment that is collinear to the tangent portion. The method also includes the steps of depositing adhesive in about 50% of the coverage length and in about 10% of the fill length, to consistently form a joint interconnecting the first member with the second member during the manufacturing process. The adhesive amount and placement of adhesive within the fill and coverage portions of the joint is designated to keep seepage to a minimum and stress transfer to a maximum.

Kehr et al. '217 does not disclose, anticipate or otherwise suggest the claimed invention of claim 31 as amended. Kehr '217 merely discloses that the adhesive is deposited in a plurality of spaced apart parallel lines, and each line extends the full length of a planar member. In Kehr, the coverage length is the length of the member, and the fill portion is presumably the width between the lines of adhesive. Unlike the Applicant's invention, Kehr does not deposit any adhesive in the fill portion.

Kehr et al. '217 merely discloses a rolled material. Kehr et al. '217 does not disclose that the member initially has a planar portion and an arcuate portion at the second end of the planar portion. Kehr et al. '217 does not disclose the step of defining a coverage length as extending along a length of the first member from a first point to a second point where the first member begins to curve to form a tangent portion, and a fill length as extending from the second point to a line segment that is collinear to the tangent portion. In fact, Kehr is distinguishable since the glue is applied to the sheet of materials as it comes off the roll which is not the same as the first member initially having a planar portion and an arcuate portion.

The Examiner suggests that Kehr teaches that the adhesive is deposited along up to 50% of the coverage portion and up to 10% of the fill portion, since the glue lines cover less than 50% of the area of the member. Kehr et al. '217 does not disclose the step of applying the viscous

adhesive in about 50% of the coverage length and about 10% of the fill length in order to secure the two members together. The method of forming a joint disclosed by Kehr et al. is clearly distinguishable from Applicant's invention, since the Applicant's method clearly includes the step of defining the fill and coverage lengths in relation to each other and with respect to the length of the first member. The Applicant clearly defines the shape of the first member, which is not the same as the planar member of Kehr et al. As shown in Fig. 1 and Fig. 2 of Kunz, the adhesive is applied in parallel lines, and each line extends from edge to edge, or across 100% of the coverage length of the first member.

The Examiner suggests that Kehr teaches a coach joint in Fig. 3. In fact, Kehr et al. '217 teaches away from the present invention, since Kehr's method includes the step of forming the honeycomb core by folding one sheet of material back and forth over itself, and the adhesive is applied in a plurality of parallel, spaced apart lines to achieve an unexpanded honeycomb. The adhesive is cured, in a curing step. The honeycomb core is expanded in another step to achieve the shape shown in Fig. 3.

Since the initial structure of each member of the joint and the method of forming the joint of Kehr et al. are distinguishable from Applicant's invention, Applicant's invention is not anticipated by Kehr et al. '217. Therefore, it is respectfully submitted that claim 31 as amended and the claims dependent therefrom, are allowable over the rejection under 35 U.S.C. §102(b).

Claim 36 was rejected under 35 U.S.C. §102(b) as being anticipated by Kunz (U.S. Patent 4,803,124). The Applicant respectfully traverses this rejection.

U.S. Patent Number 4,803,124 to Kunz discloses a method of bonding a semiconductor chip to a mounting surface using a conductive die attach adhesive material. The adhesive is deposited as a number of spaced apart droplets having a star shape. The method includes the

steps of simultaneously applying first and second deposits of die adhesive material in lateral spaced relation to each other on a mounting surface, and the first deposit has a shape of a starfish. The starfish shape has the characteristic of having a raised central portion disposed at the intersection of a plurality of centrally thickened radially extending arms (column 7, lines 55-58). The method also includes the steps of applying the bonding surface of a semiconductor chip against the first deposit, to cause the first deposit to spread across the bonding surface to eliminate voids within the die attach adhesive material, to provide full coverage of the bonding surface with a uniformly thick layer of die attach material. The method further includes the steps of disposing a second deposit at a locus lateral of the first deposit for securing a grounding chip thereto, and for making an electrical connection with the first deposit in response to the application of the semiconductor chip thereto. The bonding surface of the semiconductor chip is fully and symmetrically covered (Fig. 7 with the chip 41 removed from the bonding layer and column 8, lines 16-17). As shown in Figs. 5, and 6, the semiconductor package includes a mounting surface 49 for supporting the layer 39 of die attach adhesive material disposed beneath a semiconductor chip 41. An electrically conductive causeway 43 can be formed to interconnect chip 40 with chip 41. Kunz '124 does not disclose a method of repetitively forming a lap joint between two members that includes the steps of defining a coverage length as the length of overlap between the two members, defining a center point of the coverage length, and applying a viscous adhesive at the center point that extends equidistantly between 50 to 75% of the coverage length, to secure the two members together.

In contradistinction, claim 36 discloses a method of repetitively forming a lap joint between two members using a viscous adhesive during a manufacturing process. The method includes the steps of positioning a first generally planar member to overlap a second generally

planar member to form a lap joint during the manufacturing process, and the joint includes a coverage portion defined by a length of overlap between the first member and the second member. The method further includes the steps of initially depositing the viscous adhesive at a center point for the coverage length, and the adhesive extends between 50 to 75% of the coverage length, so that it is equidistant from the center point, to repetitively interconnect the first member and the second member for each joint during the manufacturing process, so that seepage of the adhesive from the joint is a minimum value while stress transfer of the joint is a maximum.

Kunz '124 does not disclose, anticipate or otherwise suggest the claimed invention of claim 36 as amended. Kunz '124 merely discloses the step of initially applying the adhesive in a starfish pattern having a raised center portion disposed at the intersection of a plurality of centrally thickened radially extending arms. Kunz '124 merely discloses the step of applying the chip to the starfish-shaped deposit to cause the deposit to spread such that voids are eliminated and the distributed volume of the deposit is proportional to the surface area of the bonding surface of the chip. Kunz '124 merely discloses the step of depositing a second deposit laterally of the first deposit, securing a grounding chip to the second deposit, so that the second deposit makes contact with the first deposit.

Kunz '124 does not include the step of positioning two members so that they overlap, and the length of overlap defines a coverage length of the joint. Kunz '124 does not include the step of defining the center of the coverage length. Kunz '124 does not include the step of depositing the viscous adhesive at the center of the coverage length so that it extends between 50 to 75% of the coverage length, and the adhesive is equidistant from the center point after curing. Kunz '124 is distinguishable from Applicant's invention since Kunz does not include the step of

defining the center of the coverage length. Kunz is also distinguishable from Applicant's invention since the adhesive occupies 100% of the coverage length after the adhesive is cured. This is evident from the joining of the first drop of adhesive with the second drop of adhesive to form an electrical bond. In fact, the teachings of Kunz '124 state that the distributed volume of the deposit is proportional to the surface area of the bonding surface, and that the bonding surface is fully and symmetrically covered.

The method of forming a joint and resultant joint of Kunz '124 is clearly distinguishable from Applicant's invention, since the adhesive occupies 100% of the coverage portion after the adhesive is cured. In fact, Kunz '124 teaches away from the present invention, since seepage is desirable to make the electrical connection between the grounding chip through the second deposit. Since the structure of the joint and the method of forming the joint of Kunz '124 are distinguishable from Applicant's invention, Applicant's invention is not anticipated by Kunz '124.

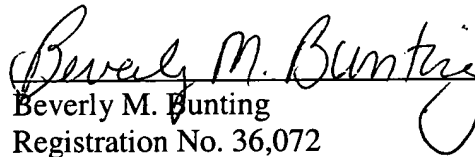
Therefore, it is respectfully submitted that claim 36 is allowable over the rejection under 35 U.S.C. §102(b).

Claims 34 was rejected under 35 U.S.C. §103(a) as being unpatentable over Kehr as applied to claim 31 above and further in view of Adhesive Handbook. The Applicant respectfully traverses this rejection with respect to claim 34 for the reasons set forth above with respect to the rejection under §102(b).

In addition, Applicant further submits that since the base claim is allowable, the dependent claim is likewise allowable. Therefore, it is respectfully submitted that claim 34 is allowable over the rejection under 35 U.S.C. §103(a).

Based on the above, Applicant submits that the claims are in a condition for allowance, which allowance is respectfully solicited. If the Examiner finds to the contrary, it is respectfully requested that the undersigned in charge of this application be called at the telephone number given below to resolve any remaining issues.

Respectfully submitted,


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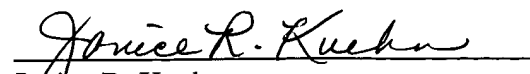
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